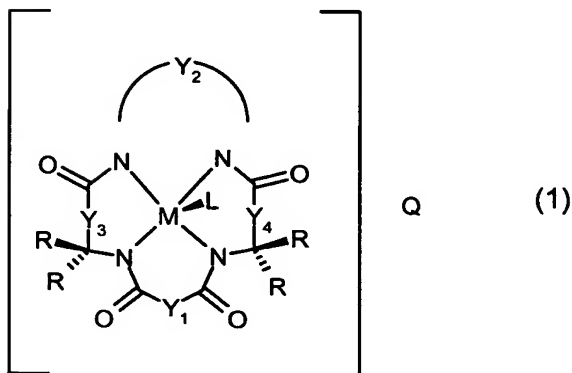


WHAT IS CLAIMED IS:

1. A process for removing excess, unfixed dye from dyed textile materials comprising treating the dyed textile materials with an oxidizing system comprising the two components

- 5 1) a macrocyclic metal complex of the general formula (1)



where

Y₁, Y₃ and Y₄ are each independently a single bond or a bridge member which contains 1, 2 or 3 carbon atoms in the bridge,

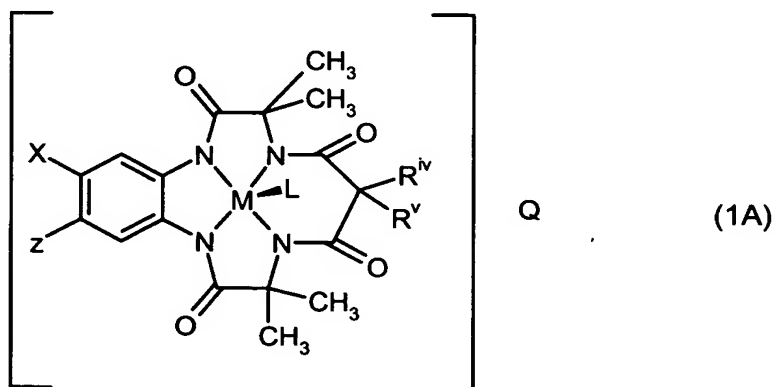
- 10 Y₂ is a bridge member having at least 1 carbon atom in the bridge,

- 15 R is independently in each occurrence hydrogen, alkyl, cycloalkyl, cycloalkenyl, alkenyl, aryl, alkynyl, alkylaryl, halogen, alkoxy, phenoxy, CH₂CF₃ or CF₃ or two R radicals which are bound to the same carbon atom combine to form a substituted or unsubstituted benzene, cycloalkyl or cycloalkenyl ring, the carbon atom to which the two R radicals are bound being part of the benzene, cycloalkyl or cycloalkenyl ring,

- 5 M is a member selected from the group consisting of transition metals in the oxidation states I, II, III, IV, V, VI and combinations thereof or is a member selected from groups consisting of 6, 7, 8, 9, 10, 11 of the periodic table and combinations thereof,
- Q is a counterion which balances the charge of the macrocyclic metal complex on a stoichiometric basis, and
- L is a further ligand
- and
- 10 2) an oxidizing agent
2. The process according to Claim 1, characterized in that the dyed textile material is contacted with the oxidizing system in at least one post-dyeing rinse step.
- 15 3. The process according to Claim 1, characterized in that in the macrocyclic metal complex of the general formula (1) ,
- Y₁, Y₃ and Y₄ are each independently a (-CH₂-)_x group, where x is 1, 2 or 3 and one or more hydrogen atoms in the (-CH₂-)_x group may be substituted by an Rⁱ radical, Rⁱ being alkyl, cycloalkyl, cycloalkenyl, alkenyl, aryl, alkynyl, alkylaryl, halogen, alkoxy or
- 20 phenoxy, or two Rⁱ radicals which are bound to two adjacent carbon atoms of the (-CH₂-)_x group combining to form a benzene, cycloalkyl or cycloalkenyl ring which may contain one or more hetero atoms.
- 25 4. The process according to Claim 1, characterized in that in the macrocyclic metal complex of the general formula (1)

- Y₂ is a bridge member having 1, 2 or 3 carbon atoms in the bridge, comprising a (-CH₂)_y group, where y is 1 or 2 and one or more hydrogen atoms in the (-CH₂)_y group is optionally substituted by an Rⁱⁱ radical, Rⁱⁱ being alkyl, cycloalkyl, cycloalkenyl, alkenyl, aryl, alkynyl, alkylaryl, halogen, alkoxy or phenoxy, or two Rⁱⁱ radicals which are bound to two adjacent carbon atoms of the (-CH₂)_y group combining to form an optionally substituted benzene, cycloalkyl or cycloalkenyl ring which optionally contain one or more hetero atoms.
- 5.
5. The process of Claim 4, characterized in that optionally the hetero atoms are one of N, O or S, and characterized in that optionally the substituted benzene ring is substituted by electron-donating or electron withdrawing radicals.
- 6.
6. The process according to Claim 1, characterized in that in the macrocyclic metal complex of the general formula (1),
- the R radicals are each independently hydrogen, C₁-C₈-alkyl, C₃-C₈-cycloalkyl, C₄-C₁₂-cycloalkenyl, C₂-C₈-alkenyl, C₆-C₁₄-aryl, C₂-C₁₂-alkynyl, C₁-C₁₂-alkylaryl, halogen, alkoxy, phenoxy, CH₂CF₃ or CF₃ or two R radicals which are bound to the same carbon atom combine to form a substituted or unsubstituted benzene, C₃-C₈-cycloalkyl or C₄-C₁₂-cycloalkenyl ring, with the carbon atom to which the two R radicals are bound being part of the benzene, cycloalkyl or cycloalkenyl ring.
- 7.
7. The process according to Claim 1, characterized in that in the macrocyclic metal complex of the general formula (1) M is selected from the group consisting of Cr, Mo, W, Mn, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd or Pt.

8. The process according to Claim 1, characterized in that in the macrocyclic metal complex of the general formula (1) Q is an alkali metal counterion, $\text{NR}^{\text{iii}}_4^+$ or $\text{PR}^{\text{iii}}_4^+$, where every R^{iii} is independently hydrogen, alkyl, aryl, alkylaryl, alkenyl or joins to form a cycloalkyl, cycloalkenyl or aryl ring which optionally contains one or more hetero atoms.
9. The process according to Claim 8, wherein the hetero atoms are oxygen, sulphur or nitrogen.
10. The process according to Claim 1, characterized in that in the macrocyclic metal complex of the general formula (1) L is a labile ligand.
11. The process according to Claim 10, wherein the labile ligand is H_2O , Cl or CN.
12. The process according to Claim 1, characterized in that a macrocyclic metal complex used has the general formula (1A)



where

X and Z are each independently hydrogen, electron-donating or electron-withdrawing groups,

- 5 R^{IV} and R^V are each independently hydrogen, alkyl, cycloalkyl, cycloalkenyl, alkenyl, aryl, alkynyl, alkylaryl, halogen, alkoxy or phenoxy radicals or combine to form a cycloalkyl or cycloalkenyl ring which optionally contain one or more hetero atoms,
- M is a transition metal of the oxidation states I, II, III, IV, V, VI or is selected from the groups 6, 7, 8, 9, 10 or 11 of the periodic table,
- 10 Q is a counter ion which balances the charge of the macrocyclic metal complex on a stoichiometric basis, and
- L is a further ligand.
13. The process according to Claim 12, characterized in that X and Z in the general formula (1A) are each independently halogen, SO_3^- ,
15 OSO_3^- , OSO_3R^{vi} where R^{vi} is hydrogen, alkyl, aryl or alkylaryl, NO_2^- , C_1 - C_8 -alkoxy, C_1 - C_8 -alkyl, or hydrogen.
14. The process according to Claim 12, characterized in that in the macrocyclic metal complex of the formula (IA), R^{IV} and R^V are each
20 independently hydrogen, alkyl, cycloalkyl, cycloalkenyl, alkenyl, aryl, alkynyl, halogen, alkoxy or phenoxy radicals or combine to form a cycloalkyl ring, or a cycloalkenyl ring, where the cycloalkyl or cycloalkenyl ring optionally contains one or more hetero atoms.
15. The process according to Claim 14, characterized in that the alkyl is selected from the group consisting of C_1 - C_5 -alkyl, methyl and ethyl.
- 25 16. The process according to Claim 1, characterized in that the oxidizing agent comprises hydrogen peroxide, hydrogen peroxide adducts, urea peroxide, compounds capable of releasing or

generating hydrogen peroxide in aqueous solution, perborate, organic peroxides, persulphates, or persilicates.

17. The process according to Claim 16, characterized in that the hydrogen peroxide adducts are selected from the group consisting of alkali metal, sodium, lithium and potassium.
18. The process according to Claim 16, characterized in that optionally the organic peroxides are benzoyl or cumene hydroperoxides; and optionally the persulphates are peroxymonosulphate or Caro's acid.
19. The process according to Claim 1, characterized in that the dyed textile material is contacted with the oxidizing system in at least one post-dyeing rinse step by at least one rinse liquor having the two components of the oxidizing system added to it either individually in any order or else individually and concurrently.
20. The process according Claim 1, characterized in that the dyed textile material is contacted with the oxidizing system in one post-dyeing rinse steps.
21. The process of Claim 1, characterized in that the dyed textile material was dyed with water-soluble dyes which are optionally reactive dyes.
22. Dyed, textile material prepared by the process of Claim 1.